10. On repairs and the construction of new buildings, the outlay of the year was Rs. 457.

11. The number of new cases taken into Court during the year was 60 against 85 of the year before. Of the 52 cases disposed of in 1896-97, conviction was obtained in 34, and the percentage of failure for the two years was 40 and 35, respectively, while the cases compounded under S. 67 of the Indian Forest Act rose from 2,029 to 2,162.

12. The area closed against the grazing of browsers and other animals is in excess of what it was in 1895-96 for the sole reason that there is an urgent need for bringing a vast area under reproduction.

13. The impoundings have been heavier, the figures of 1896-97 showing an excess of 8,620 head of animals over those of 1895-96. The increase is mainly among browsers.

14. The value of free labour availed of for the purposes of constructing and repairing boundary marks and paths as well as erecting hedges round the compartments under reproduction in the different Divisions of the Circle is estimated at Rs. 10,266 in the aggregate.

15. The season was one of normal inundation, in consequence of which the natural reproduction was of an average character, and the efforts made to reproduce certain areas artificially also met with a fair amount of success. In the Kot Sultan plantation, cultural operations were undertaken in a further area of 687 acres. The young crop of seedlings, natural as well as artificial, was more or less injured by frost in some of the forests of Upper and Central Sind.

16. The average price per acre realised by the sale of the standing crop in the coupes marked out for exploitation during 1896-97 was Rs. 8-0-4 against Rs. 6-0-8 of the year previous.

17. From grazing fees, the receipts of the year amounted to Rs. 58,470, *i.e.*, there was an increase of Rs. 1,390 over those of the one preceding.

18. The gross as well as the surplus revenue of the Forest year exhibit a falling off of Rs. 1,53,448 and Rs. 52,850, respectively, owing to unprecedented circumstances. In the first place, the cost of the departmental fellings formed an item of credit on the revenue side for a portion of the year 1895-96, and in the second place the instalments, amounting to Rs. 61,000, due from coupe contractors and payable before the end of June 1897 could not be recovered in time, and the revenue realised by the sale of bahan timber fell short of the expectations owing to the outbreak of plague.

CHAPTER I.

EXTENSION AND CONSTITUTION OF STATE FORESTS.

I.—Alteration of Area.

Changes during the year.

19. The modifications in area that have taken place during the past year are given in detail in Forms Nos. 46 and 46A. The following abstract statement shows the net results of these changes :—

Class of Forests.	At the commencement of the year.		Changes during the year.				At close of the year.	
			Added.		Excluded.			
	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.
Reserved ...	1,060	106	3	535	...	...	1,064	1
Protected ...	4	372	...	...	3	427	...	585
Unclassed ...	...	...	3	427	...	...	3	427
Total ...	1,064	478	7	322	3	427	1,068	373

Explanation of the differences.

20. The difference in the area coming under each of the three heads adopted is explained below :—

(*a*) *Reserved Forests.*

(i) The afforestations by notifications under the Indian Forest Act amounted to 2,071, 136 and 14 acres, respectively, in the Shikarpur, Hyderabad and Karachi Collectorates.

(ii) An area of 88 acres, which was constituted a Reserved Forest under the authority of Government Resolution No. 7031, dated 22nd August 1894, in the Tatta Taluka of the Karachi District having not been taken into account since it was notified, has been included in this year's returns.

(iii) The addition of the remaining 146 acres is due to the correction of a mistake made in the past in striking off from the register lands simply alienated for the requirements of the Irrigation Department in the Mehar and Labdarya Talukas of the Shikarpur District, but not formally disforested under S. 26 of the Indian Forest Act.

(*b*) *Protected and Unclassed Forests.*

The rectification of an error in including $3\frac{427}{640}$ square miles under Protected Forest, through a misinterpretation of the orders contained in Government Resolution No. 6453, dated 13th September 1886, accounts for the difference shown under these two heads. This area Government, when according their sanction to its temporary retention by the Forest Department, had no intention of recognising as a legally constituted Protected Forest.

The actual increase in the total area of State Forests was 2,221 acres, the remainder of the total difference of 234 acres resulting merely from errors corrected and omissions supplied.

Reconciliation of figures of forest areas.

21. The reconciliation of the discrepancies discovered between the areas shown in statistical returns of the Agricultural Department and those given in Forest Form No. 46 is found to be surrounded with no ordinary difficulties. But every effort is being made to remove them, or, at any rate, to reduce their number to a minimum. It has been reported that, while the figures were being scrutinised in a divisional office, it was necessary to send for the Survey Registers with a view to trace the origin of the discrepancies. It so transpired that, while some of the mistakes were due to purely clerical errors, others had been caused by the peculiar method in which the Survey records are maintained, in that the legally constituted forest area in some cases has been omitted, while that which has not been formally disforested under the Indian Forest Act has been excluded from their Registers. The Superintendent of Land Records and Agriculture has, therefore, been asked to adopt certain suggestions and revise his Registers in order to render the detection and subsequent elimination of errors comparatively easy.

Details of the distribution of the legally constituted forest areas.

22. The distribution amongst Forest Divisions of the legally constituted areas, at the commencement and the close of the year under report, is given in the following statement :—

Division.	Area on 1st July 1896.						Added during the year.					
	Reserved.		Protected.		Unclassed.		Reserved.		Protected.		Unclassed.	
	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.
Sukkur	449	358	...	585	...	...	...	...	...	...	...	...
Naushahro	241	207	3	427	...	...	(a) 3	433	...	...	3	427
Hyderabad	197	121	...	...	...	...	...	...	...	...	...	...
Jerruck	172	60	...	...	...	...	(c) 11	286	...	...	...	...
Total ...	1,060	106	4	372	...	...	15	79	...	...	3	427

Division.	Excluded during the year.						Area on 30th June 1897.					
	Reserved.		Protected.		Unclassed.		Reserved.		Protected.		Unclassed.	
	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.
Sukkur	...	...	...	...	...	...	449	358	...	585	...	...
Naushahro	...	...	3	427	...	...	245	...	...	...	3	427
Hyderabad	(b) 11	184	...	...	...	...	185	577	...	...	...	...
Jerruck	...	...	...	...	...	...	183	346	...	...	...	...
Total ...	11	184	3	427	...	...	1,064	1	...	585	3	427

(a) By settlement, 3 square miles 287 acres. By correction of errors, 146 acres.

(b) By redistribution.

(c) By settlement, 14 acres. By correction of errors, 88 acres. By redistribution, 11 square miles 184 acres.

N. B.—To ensure greater facility of inspection and to equalise the area between the two divisions, $11\frac{144}{640}$ square miles were transferred from the Hyderabad to the Jerruck Division.

Action of the river.

23. The following statement shows approximately the action of the river on the forest frontage during the period under report :—

Division.	Area lost.	Area gained.	Amount spent.	Net value of material sold.	Net value of material remaining in hand.
	Acres.	Acres.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sukkur ...	1,607	6,956	126 0 0	648 0 0	585 0 0
Naushahro ...	905	9,046	...	3,419 12 0	...
Hyderabad ...	677	800	...	451 12 0	...
Jerruck ...	325	1,120	...	276 0 0	...
Total ...	3,514	17,922	126 0 0	4,795 8 0	585 0 0

24. The set of the river was in favour of the forests throughout the year, especially in the Naushahro and Sukkur Divisions, resulting in more than double the area being thrown up in front of the forests than in 1895-96. This addition may or may not be washed away, and, even should it remain as permanent accretions, may not be handed over to the Department.

The area gained during the year was 14,408 acres in excess of the area lost by erosion. Out of the latter, 2,199 acres were valuable and fit for the axe, whereas the remaining 1,315 acres were low sand or mud banks, or covered with inferior or useless growth.

Erosion operations.

25. Fresh orders were issued, in the sense of the remarks made by the Commissioner in Sind in paragraph 3 of his last review, to ensure against unavoidable loss of timber on banks threatened by erosion. The small amount of Rs. 126 spent for the purpose of keeping "cutting" banks clear of trees and to save them from falling into the river was spent in only one forest of the Sukkur Division, and does not represent the real extent of the erosion operations. In the other divisions as well as in Sukkur, the timber as a rule was sold either standing for a lump sum or on reduced royalty to contractors, who bore the cost of felling and removing. The net value of the wood thus extracted (Rs. 5,380), however, indicates that the measures taken were as vigorous as could be expected under the circumstances.

Survey of the river frontage of forests.

26. In order to keep a correct record of the changes due to the action of the river and to enable the Department to see whether, in the long run, by such changes it is a gainer or a loser, the river frontage of most of the forests was for the first time correctly surveyed and its correct position marked on the maps. This was urgently called for, having in a majority of cases never been attempted with any pretensions to accuracy since the original reservation.

Acquisition of *kachas*.

27. The following statement exhibits the success which attended the efforts of the Department in acquiring new formations thrown up in front of and adjoining Reserved Forests under the Commissioner in Sind's Circular No. 1238, dated 11th April 1889 :—

Division.	No. of undecided claims on 1st July 1896.	No. of new claims.	No. of claims decided.			No. of claims undecided on 30th June 1897.
			In favour of the Department.	Against the Department.	Total.	
Sukkur	1	6	5	...	5	2
Naushahro	3	10	9	...	9	4
Hyderabad	1	2	1	...	1	2
Jerruck	* 1	2	2	...	2	1
Total ...	6	20	17	...	17	9

* This claim is for an accretion to the Keti Mahrani Forest, transferred from the Hyderabad Division.

28. It is very satisfactory to note that all the claims preferred by the Department were settled in its favour. A new claim of the year (Sharifpur in the Larkana Range), rejected by the Collector, has been appealed to, and until the decision of, the Commissioner is known, it has been shown as pending.

II.—Forest Settlements.

Area declared Reserved Forest.

29. The areas finally settled and notified under S. 19 of the Indian Forest Act during the period of this report have been already given under paragraph 20, above.

Areas awaiting final settlement.

30. The settlement of the following areas was awaiting the final orders of Government at the close of the year :—

Division.	Civil District.	Name of Taluka.	Area.	No. and date of Notification under S. 4.
			A. g.	
Jerruck ...	Hyderabad ...	Guni ...	976 28	1967 of 14th March 1895.

31. The work left to be done in connection with Forest settlements is summarised below in the form prescribed in paragraph 3 of Government Resolution No. 5068, dated 29th June 1896:—

Areas under different stages of enquiry.

Division.	STAGES OF OUTSTANDING WORK.					
	OCCUPIED LANDS TO BE ACQUIRED.					
	By exchange or compensation.		Land to be notified under Land Acquisition Act.	Land to be notified under S. 4.	Land to be settled under S. 7.	Land to be notified under S. 19.	Total.
	Negotiations proceeding.	Negotiations completed.					
				A. g.	A. g.	A. g.	A. g.
Sukkur	...	...	...	1,794 7	176 37	...	1,971 4
Naushahro	...	...	...	2,773 32	1,618 15	...	4,392 7
Hyderabad	...	...	...	...	9,397 17	...	9,397 17
Jerruck	...	...	...	...	124 29	976 28	1,101 17
Total ...	...	...	...	4,567 39	11,317 18	976 28	16,862 5

32. As there has been no special Forest and Settlement Officer attached to this Circle since the end of March 1895, the different Assistant and Deputy Collectors have been appointed *ex-officio* Forest Settlement Officers in their own respective charges, and the work of enquiry and settlement in respect of the acquisition of lands notified under S. 4 of the Indian Forest Act is entrusted to them. The protracted delay prior to October 1896 in formulating proposals and submitting them with the necessary draft notifications under S. 19 in respect of the lands awaiting settlement is much to be regretted. The papers in several cases have now been with the officers concerned for over two years without any visible results. In the meanwhile, the Divisional Forest Officers, under instructions from this office, continued to remind the Forest Settlement Officers with a view to their settlement being expedited, but as their communications in more instances than one did not meet with a ready response, I took up the matter myself and addressed the different Collectors, pointing out what areas were awaiting to undergo enquiries, and asking their co-operation, which it is hoped will bring forth satisfactory results. Although it has to be admitted on the one hand that—the ordinary Revenue and Magisterial duties besides being always heavy—the officers concerned had, during a great portion of the year under report, to concentrate their energies in devoting their chief attention to the measures for the suppression of the plague, on the other, it has to be remembered that, the longer the interval that lapses between the issue of the notifications under Ss. 4 and 19, the worse is the fate of the areas proposed for reservation, as the reports received show that the tree growth on them, unguarded as it is, is being mercilessly hacked and wantonly damaged by goatherds and other village population.

III.—Demarcation.

33. It is to be regretted that the demarcation of the areas afforested between 1893 and 1895 could not be completed by Mr. Napier, who during the greater portion of the year continued to be Forest Demarcation Officer in addition to his duties as Divisional Forest Officer, Working Plans. The chief reasons for this work having been left in an incomplete state at the close of the year were as follow:—

Demarcation.

(i) The inroads made by the river had so altered the shape of some of the newly afforested areas, while in others the maps prepared by Mr. Barrow were so utterly at variance with the configuration of the ground, that their demarcation could not be undertaken without further consultation with the

Revenue authorities, which, having entailed considerable delay, led to the work being postponed for the time being.

(ii) It was found that selections had been made to include within forest limits certain other "dehs" which are conterminous with those already afforested. It was, therefore, considered useless to lay out the boundary, only to be changed soon after.

(iii) The deputation of Mr. Napier to Plague duty and his subsequent serious illness, which necessitated his immediate departure to Europe on leave.

Outturn of the Demarcation work.

34. The outturn of the work during the year under report is shown in the following statement :—

Civil District.	Length of boundary demarcated.		No. of cairns erected.	Amount spent.			Rate per mile.		
	Miles.	Yards.		Rs.	a.	p.	Rs.	a.	p.
Karachi ...	8	1,375	88	109	5	0	12	7	2
Hyderabad ...	9	1,058	97	79	0	0	8	3	7
Total ...	18	673	185	188	5	0	10	3	11

Note.—The cost was greater in the Jerruck than in the Hyderabad Division, owing to no free labour being available in the former.

35. Considering that Mr. Napier was only able to spare about one month and a half (from 10th November to 23rd December 1896), and that the delimitation had to be determined by actual survey, the work turned out could not be greater.

Areas remaining to be demarcated.

36. From the following summary, the nature of the outstanding work will be seen :—

District.	Total area notified under S. 19.		Area of which demarcation is complete.						Area partly demarcated by Forest Demarcation Officer.		Area absolutely untouched by any one.	
			By Forest Demarcation Officer.		By Divisional or Range Forest Officers and Revenue people.		Total.					
	Acres.	g.	Acres.	g.	Acres.	g.	Acres.	g.	Acres.	g.	Acres.	g.
Shikarpur	17,301	24	14,864	36	2,436	28	17,301	24	...		...	
Hyderabad	28,204	15	7,726	31	7,925	17	15,652	8	7,795	4	4,757	3
Karachi	20,769	4	6,613	11	9,770	36	16,384	7	...		4,384	37
Upper Sind Frontier ...	26,525	11	24,861	13	...		24,861	13	1,663	38	...	
Total ...	92,800	14	54,066	11	20,133	1	74,199	12	9,459	2	9,142	0

Boundary marks and paths.

37. Repairs to existing boundaries and boundary marks of the old Reserves were carried out as usual with the assistance of cattle breeders who live within forest limits and

other persons in enjoyment of forest privileges. The extent of the operations, and the value of free labour availed of for this purpose, is shown below :—

Division.	No. of boundary marks put up and repaired.	Length of boundary paths cleared and repaired.	Estimated value.
	Miles.	Miles.	Rs. a. p.
Sukkur	7,157	948	1,395 0 0
Naushahro	2,878	20	404 0 0
Hyderabad	1,931	260	984 0 0
Jerruck	2,409	178	819 0 0
Total ...	14,375	1,406	3,602 0 0

38. The riverain forests having been flooded to a greater extent than in the previous year, the number of marks replaced or repaired, as well as the length of the boundary paths cleared, was in excess of the year 1895-96 by 2,554 and 922 miles, respectively.

IV.—Surveys.

Surveys.

39. The Forest Survey branch parties of the Government of India have not yet commenced operations in this Circle. The Riverain Survey has been completed, and the maps prepared have been found to be of great use.

CHAPTER II.

Management of State Forests.

I.—Regulation and Management.

(a) Working Plans and their Control.

Preparation of Working Plans.

40. During the year under report, it might be said the year in which a separate Division for preparing Working Plans came into existence, it was not possible for the officers in charge, Messrs. Napier and Dalal, to undertake more work than was done. After completing the demarcation referred to in paragraph 34, work was commenced in the Sukkur Division at the beginning of January 1897 with a view to the organisation of the Rohri, Dubar Wahan, Katha, Changni, and Hingora Forest Reserves in the Sadhuja Range, which, besides being in close proximity of the North-Western Railway line, come within the direct influence of the annual floods and at the same time, being safe from erosion, are not subject to fluctuations in area. The object of taking these areas first in hand is not simply because they play at present a very important part in the fuel supply of the North-Western Railway and the Quetta Commissariat, but chiefly to carry out the intention I have had all along in view to convert them gradually into babul (Acacia Arabica) and tali (Dalbergia Sissoo) forests by systematic cultural operations, as they are capable of being stocked with these valuable species in place of the existing growth of kandi (Prosopis Specigera) and lye (Tamarix Gallica). This work was finished by the middle of March, when, at the Commissioner's request, Mr. Napier's services were lent for Plague duty, and he was placed under the orders of the Sukkur Plague Committee. Mr. Dalal, Divisional Forest Officer, Hyderabad, then took charge of the Working Plans office in addition to his own, and before the close of the tour season made a survey in advance of the Miani, Muhammad Khan, Kathri, and Matiari babul reserves in order that correct maps may be ready to enable the organisation of these very valuable State properties being taken in hand at the commencement of the following working season.